



The upper photo shows a series of Worthington centrifugal pumps used to recirculate wood molasses at Superwood Company, Duluth, Minnesota. Wood molasses is a highly viscous substance and it would pose intake problems for conventional pumps. But the Type 316 stainless steel pumps pictured—manufactured by Worthington Pump Division, Dresser Industries, Inc., Mountain Side, New Jersey—feature an added device for increasing pump intake capability that Worthington calls a flow inducer. At left, a Worthington technician is inspecting

inducers of several sizes.

The inducer is essentially a small booster pump that lifts the suction pressure sufficiently for the rotating main impeller of the centrifugal pump to operate efficiently at higher fluid intake levels. In the Worthington design, the boosting inducer and the main pump are incorporated into one casing and mounted on a single shaft. The concept derives from NASA technology of the early 1960s, when space payloads were

becoming heavier and rocket thrust demands were rising, requiring faster fuel flow in liquid fuel rocket systems. NASA developed the inducer as an auxiliary impeller to boost the flow rate capability of rocket fuel pumps.

Worthington picked up the NASA technology and further advanced it to meet a need, in the 1970s, for higher industrial pump operating speeds, occasioned by rising production costs and industry's drive to offset them by getting maximum performance out of plant equipment. There are several ways to increase pump operating speeds but, according to Worthington, the inducer offers the most cost-effective way. The company offers inducer-equipped pumps for special applications requiring improved suction performance; they come in a number of sizes, primarily in the small, higher speed range.

An interesting sidebar is that the inducer concept originated with a Worthington employee, one Oscar Dorer, who was granted the first inducer patent about 1926. The concept was too advanced for its time and the idea was forgotten until NASA developed the implementing technology. ▲